REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 6 and 8-30 are presently pending in this application, Claims 10-29 having been withdrawn from further consideration by the Examiner, Claims 1-5 and 7 having been canceled, Claim 6 having been amended and Claim 30 having been newly added by the present amendment.

In the outstanding Office Action, Claims 1, 2 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP 56-165512 (hereinafter "JP '512") in view of Litwinski et al. (U.S. Patent 6,726,085) and Tanaka et al. (U.S. Patent 6,892,928); and Claims 3-5, 8 and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP '512 in view of Litwinski et al. and Tanaka et al. and Aota et al. (U.S. Patent 6,581,819). However, Claim 7 was indicated as including allowable subject matter.

First, Applicant acknowledges with appreciation the indication that Claim 7 includes allowable subject matter. Accordingly, new Claim 30 incorporating the subject matter recited in Claims 6 and 7 has been added herein, and Applicants respectfully request that Claims 1-5 and 7 be canceled without prejudice. Claim 6 has been amended solely for formality, and Applicants believe that Claim 6 includes allowable subject matter as discussed below.

Before addressing the rejections based on the cited references, a brief review of Claim 6 is believed to be helpful. Claim 6 is directed to a method of producing a tubular metal body and recites: "preparing a tube extruded through a porthole die and comprising a plurality of components joined to one another with a plurality of joint portions extending over the entire length of the tube; placing a probe of a friction agitation joining tool from outside into each of the joint portions of the extruded tube so as to position the probe partly in the tube components on opposite sides of the joint portion; and moving the extruded tube and the

probe relative to each other longitudinally of the tube to thereby frictionally agitate the base material metal of the extruded tube for a modifying treatment to produce finely divided crystal grains."

By moving the extruded tube and the probe as such, the metal of the tube as the base material thereof in each of the joint portions is subjected to a modifying treatment to produce finely divided crystal grains, and accordingly, the joint portions are improved in mechanical properties, such as strength and elongation, and in corrosion resistance, giving the tubular metal body high pressure resistance. As a result, even if the metal body is used as a pressure tube, for example, in pressure piping for passing a high-pressure gas therethrough, the joint portions are prevented from fracturing. The tubular metal body is uniform in wall thickness and can be given an increased length or a greater size. Furthermore, the tubular body can be of complex cross sectional shape.

Applicants respectfully submit that none of JP '512, Litwinski et al. and Tanaka et al. teaches or suggests "placing a probe of a friction agitation joining tool from outside into each of the joint portions of the extruded tube so as to position the probe partly in the tube components on opposite sides of the joint portion" or "moving the extruded tube and the probe relative to each other longitudinally of the tube to thereby frictionally agitate the base material metal of the extruded tube for a modifying treatment to produce finely divided crystal grains" as recited in Claim 6. JP '512 merely describes the porthole die-extruded tube composed of components joined to one another with joint portions extending over the entire length of the tube, while Litwinski et al. describes the use of a rotatable pin 28 to modify the particle structure at the time of extrusion or forming process. Tanaka et al. is directed to a method of Friction Stir Welding (FSW), *i.e.*, producing a tubular body by forming an aluminum plate 2 into a tubular form, and thereafter welding the both side edge portions of the plate 2 butted against each other. Tanaka et al. employs FSW which is a process to be

used for welding, *i.e.*, melting with heat and then uniting the separated components. On the other hand, the method recited in Claim 6 employs friction agitation which is a process used for giving the strength to the already joined portion. Thus, Tanaka et al. is not believed to describe frictionally agitating the already joined portions of a tube extruded through a porthole die, nor is it believed that Tanaka et al. teaches or suggests frictionally agitating only joint portion of the porthole die-extruded tube of JP '512 based on Litwinski et al., assuming *arguendo* that JP '512 and Litwinski et al. are combined. Therefore, the subject matter recited in Claim 6 is believed to be distinguishable from JP '512, Litwinski et al. and Tanaka et al., and because none of JP '512, Litwinski et al. and Tanaka et al. discloses the placing or the moving as recited in Claim 6, their teachings even in combination are not believed to render the method recited in Claim 6 obvious.

For the foregoing reasons, Claim 6 is believed to be allowable. Furthermore, since Claims 8 and 9 depend directly from Claim 6, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 8 and 9 are believed to be allowable as well.

Applicants also wish to point out that the subject matters recited in Claims 8 and 9 are further distinguishable from JP '512, Litwinski et al., Tanaka et al. and Aota et al., because it is believed that Aota et al. merely describes FSW process in which extruded panels 31, 32 each having a partition 35 are welded to each other and does not teach or suggest an "extruded tube [*i.e.*, a tube extruded through a porthole die and comprising a plurality of components joined to one another with a plurality of joint portions extending over the entire length of the tube] has a reinforcing partition placed therein and extending longitudinally of the tube so as to divide inside thereof into a plurality of spaces, and in frictionally agitating the base material metal of the extruded tube in each of the joint portions thereof, a forward end of the probe is placed into the partition through each of at least two of the joint portions

to join the partition to the extruded tube by friction agitation" as recited in Claim 8 and an "extruded tube [*i.e.*, a tube extruded through a porthole die and comprising a plurality of components joined to one another with a plurality of joint portions extending over the entire length of the tube] has a reinforcing partition interconnecting at least two of the components thereof and extending longitudinally of the tube, the reinforcing partition being extruded integrally with the tube, and the base material metal of the extruded tube is frictionally agitated at all the joint portions" recited in Claim 9.

In light of the prior indication of allowable claims and in view of the amendments presented above, Applicant respectfully submits that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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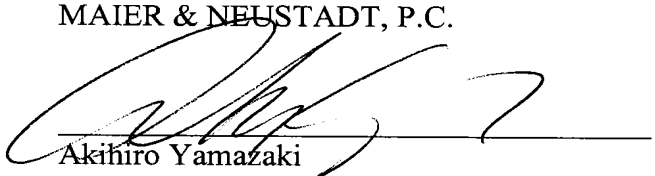

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